

### **REMARKS**

This supplemental response was requested by the examiner in a telephone conference on May 21, 2010. As requested, Applicants have amended claims 67, 73, 74, 255, and 278 to clarify the claim language. In this regard, Applicants note that the claims presented herein are amended relative to the claim amendments entered in the response of March 8, 2010. In addition, Applicants have considered the similarity of certain amino acid sequences for the HPIV2 L protein provided by the examiner and present the results of the assessment below. No new matter is added in this response.

#### **Assessment of Amino Acid Sequences Reported for the HPIV2 L Protein:**


During the conference call of May 21<sup>st</sup>, the examiner expressed concern that other HIV2 protein sequences (GenBank accession numbers NP\_598406.1, CAA40788.1, and BAE00056.1) might not have sufficient homology to the sequences disclosed in the application to warrant the scope of the claims. Applicants contend that any such concerns are misplaced.

The sequences corresponding to the accession numbers above were compared via sequence alignment using the default settings of the SIM program of the Expert Protein Analysis System (ExPASy) – available at <http://expasy.org/tools/sim-prot.html>. The sequences for accession numbers NP\_598406.1 and CAA40788.1 were found to be 100% identical over their entire 2262 amino acid sequences (the results of this alignment are provided on pages 6-9). Similarly, sequences for accession number BAE00056.1 was found to be 99.3% identical to NP\_598406.1 and CAA40788.1, with 15 sequence differences in 2264 amino acids (the results of this alignment are provided on pages 10-13; however, because of the identity of NP\_598406.1 and CAA40788.1, the alignment only compares NP\_598406.1 with BAE00056.1). Nonetheless, the relevant segments of the sequences for accession numbers NP\_598406.1, CAA40788.1, and BAE00056.1 are 100% identical to the HIV2 L protein amino acid sequences shown in figure 1 of the application.

In comparing the HIV2 L protein sequences, Applicants noticed that the amino acid numbering of the NP\_598406.1 and CAA40788.1 sequences differs slightly from that of BAE00056.1 and figure 1. In particular, residues 948 and 1566 of figure 1 are numbered as

residues 946 and 1564, respectively, likely due to the presence of residue insertions in the sequence disclosed in the present application. Therefore, Applicants have amended claims 67, 255, and 278 to clarify the scope of the claims. In this regard, the claims now recite residues of the SEQ ID NOs. that correspond to the relevant sequences of figure 1.

Applicants note that the claimed SEQ IN NOs. were submitted for the pending application on May 13, 2004. Support for the amended claims can be found throughout the specification, such as in paragraph [39] and figure 1.

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### Sim

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### Results of SIMwith:

Sequence 1: NP-598408.1 (3262 residues)  
Sequence 2: CAA40788.1 (3262 residues)

### using the parameters:

Comparison matrix: blosum63  
Number of alignments computed: 20  
Gap open penalty: 12  
Gap extension penalty: 4



Evaluate the significance of this protein sequence similarity score using PRSS at [EMBLnet.CH](#).

100.00% identity in 3262 residues overlap / Score: 11757.0 / Gap frequency: 0.0%

```
NP-598408.1      1  MAAASSETLLPEVHLNSPIYKHKLIYYLLLGHPFHDLIGSISPLHNNNDQIARBSGLA  
CAA40788.1      1  MAAASSETLLPEVHLNSPIYKHKLIYYLLLGHPFHDLIGSISPLHNNNDQIARBSGLA  
*****
```

```
NP-598408.1     61  EKLOVAKSELINRVPAPRATWRFSHAAVLIWPSCLPELVKPLPHSKIQVPSQWYKLINAS  
CAA40788.1     61  EKLOVAKSELINRVPAPRATWRFSHAAVLIWPSCLPELVKPLPHSKIQVPSQWYKLINAS  
*****
```

```
NP-598408.1    121  CNTTSDSDRCMENISIKLTGKNNLPSRSRGTAGACKNSKIILNDIQSINESNKKWQPNVS  
CAA40788.1    121  CNTTSDSDRCMENISIKLTGKNNLPSRSRGTAGACKNSKIILNDIQSINESNKKWQPNVS  
*****
```

```
NP-598408.1    181  LWLTIKYPQMLIMHQSSROPTDLVHIYDTRSGLIIVITPELVIQFDRLNSVLMYPTPEMT  
CAA40788.1    181  LWLTIKYPQMLIMHQSSROPTDLVHIYDTRSGLIIVITPELVIQFDRLNSVLMYPTPEMT  
*****
```

```
NP-598408.1    241  LMVSIIMFGRMNVTALCTISHYLS ELGPRIDRLSGIVDELACQLLGDIVYKVIASLESILVY  
CAA40788.1    241  LMVSIIMFGRMNVTALCTISHYLS ELGPRIDRLSGIVDELACQLLGDIVYKVIASLESILVY  
*****
```

NP-598406. 301 GCLQKQKDFVVELAGSPHSFITTQETIDILIGSKALDKDEGITTVTQQLDIPSNLSFDLIAE  
 CAA40788.1 301 GCLQKQKDFVVELAGSPHSFITTQETIDILIGSKALDKDEGITTVTQQLDIPSNLSFDLIAE  
 \*\*\*\*\*

NP-598406. 361 MLCMLRLNGHPTLTAAQYGVNVRSEMCAGHLLDFFTINKTLAPFTTILINGYREKKGMMWF  
 CAA40788.1 361 MLCMLRLNGHPTLTAAQYGVNVRSEMCAGHLLDFFTINKTLAPFTTILINGYREKKGMMWF  
 \*\*\*\*\*

NP-598406. 421 ELILEKNASKELIEFQHDNAEISYEYTLKHWKEISLIEFKKCFDFDPGEELSIFPMKDKAI  
 CAA40788.1 421 ELILEKNASKELIEFQHDNAEISYEYTLKHWKEISLIEFKKCFDFDPGEELSIFPMKDKAI  
 \*\*\*\*\*

NP-598406. 481 SAPREDWMSVFRASLIKQNRQHNIENPWFPPREILLNPLEDDSPDPVAELRYVTGGEYL  
 CAA40788.1 481 SAPREDWMSVFRASLIKQNRQHNIENPWFPPREILLNPLEDDSPDPVAELRYVTGGEYL  
 \*\*\*\*\*

NP-598406. 541 QDDTFCASVSLKEKEIKPDORIFAKLTNKMRSQQVIARAILANHAATLMKENSVVLQQLS  
 CAA40788.1 541 QDDTFCASVSLKEKEIKPDORIFAKLTNKMRSQQVIARAILANHAATLMKENSVVLQQLS  
 \*\*\*\*\*

NP-598406. 601 LTKSHLTMSQIGIISSEKAKPYTTONISSQGVNTHIKHDSKNKRKSETASSVLTDPDYPFEL  
 CAA40788.1 601 LTKSHLTMSQIGIISSEKAKPYTTONISSQGVNTHIKHDSKNKRKSETASSVLTDPDYPFEL  
 \*\*\*\*\*

NP-598406. 661 SACTITTDLAKYELQWRVYQTIIRFASTLMRMYGVPNLFEWIHLRLIRSTLTVGDFFNPFA  
 CAA40788.1 661 SACTITTDLAKYELQWRVYQTIIRFASTLMRMYGVPNLFEWIHLRLIRSTLTVGDFFNPFA  
 \*\*\*\*\*

NP-598406. 721 ATDAFDLQKVLNGDIFIVSAGGIEGLQGMWTMISTSVIILSSAESKTRVMSVQGDNQQA  
 CAA40788.1 721 ATDAFDLQKVLNGDIFIVSAGGIEGLQGMWTMISTSVIILSSAESKTRVMSVQGDNQQA  
 \*\*\*\*\*

NP-598406. 781 IAVTTEVFRSLPSTQKKELAYAASKLFFERLRANNYGLGHQLKAQETIISSTFFIVSERV  
 CAA40788.1 781 IAVTTEVFRSLPSTQKKELAYAASKLFFERLRANNYGLGHQLKAQETIISSTFFIVSERV  
 \*\*\*\*\*

NP-598406. 841 FYQGRILTQALKNASKLCLTADVLGECTQASCENBATTIMRLTENGVERKTCYKLMNYQS  
 CAA40788.1 841 FYQGRILTQALKNASKLCLTADVLGECTQASCENBATTIMRLTENGVERKTCYKLMNYQS  
 \*\*\*\*\*

NP-598406. 901 IRQLTYGLIFPQYSIPQETISEIFLQHPKLISKIVLLPFSQLGGLNYLACSRFPNENIGDF  
 CAA40788.1 901 IRQLTYGLIFPQYSIPQETISEIFLQHPKLISKIVLLPFSQLGGLNYLACSRFPNENIGDF  
 \*\*\*\*\*

NP-598406. 961 LGTAVADLKRLLKCGALESWILYNLLAPNPGKSWATLAADPYSLGQEXLYPPTTLKRH  
 CAA40788.1 961 LGTAVADLKRLLKCGALESWILYNLLAPNPGKSWATLAADPYSLGQEXLYPPTTLKRH  
 \*\*\*\*\*

NP-598406. 1021 TQNTLMETICRPMKLGVPFTMAKEEENLLAKFLERDVLPRVAHITIDQSSIGRKKQIQ  
 CAA40788.1 1021 TQNTLMETICRPMKLGVPFTMAKEEENLLAKFLERDVLPRVAHITIDQSSIGRKKQIQ  
 \*\*\*\*\*

NP-598406. 1081 GNPFTTFTINPREKEIKPLSTKKTLSVIEYQTNLYSNYYPVILGKLEIPSTLYNITTEQTC

CAA40788.1 1081 GPFDTTETIMREGFEIKPLETKKELSVIEYNTHLSYNYFVILAEPLFIPGVILNYITDQTC  
\*\*\*\*\*

NP-598406 1141 SIDISRSLSKLSWSSELLNGRTLEGLATTPDPIEVVNSFLIVGTGDCDFCMQGGDKFTWFFL  
CAA40788.1 1141 SIDISRSLSKLSWSSELLNGRTLEGLATTPDPIEVVNSFLIVGTGDCDFCMQGGDKFTWFFL  
\*\*\*\*\*

NP-598406 1201 EMGILIDGNPETWPPPIPVVPIGSRTEERRVASMAYIKGATHSLKAALRGAGVYIWAFGDT  
CAA40788.1 1201 EMGILIDGNPETWPPPIPVVPIGSRTEERRVASMAYIKGATHSLKAALRGAGVYIWAFGDT  
\*\*\*\*\*

NP-598406 1261 VVWVNDALDIANTRVKISLEQLQTLTFLPTSANITHPLDGGATLKFPTPASSVAFSSYTH  
CAA40788.1 1261 VVWVNDALDIANTRVKISLEQLQTLTFLPTSANITHPLDGGATLKFPTPASSVAFSSYTH  
\*\*\*\*\*

NP-598406 1321 ISNDQQLLEILQRYVVDGMLIYQQLMITGLSIERTYHNPPIETSTQGEITLHLATSSCCVR  
CAA40788.1 1321 ISNDQQLLEILQRYVVDGMLIYQQLMITGLSIERTYHNPPIETSTQGEITLHLATSSCCVR  
\*\*\*\*\*

NP-598406 1381 SVDGCLICEENGEVPEQITVPYTNFTFVYDPPPLADYEIAHLDYLSYQAKINSTDYYSITDK  
CAA40788.1 1381 SVDGCLICEENGEVPEQITVPYTNFTFVYDPPPLADYEIAHLDYLSYQAKINSTDYYSITDK  
\*\*\*\*\*

NP-598406 1441 IDLLAHLTAKQMINSIIIGLDETYSIVNDAVILSDYTNHWISCCSYTKIDLVPKLMANFL  
CAA40788.1 1441 IDLLAHLTAKQMINSIIIGLDETYSIVNDAVILSDYTNHWISCCSYTKIDLVPKLMANFL  
\*\*\*\*\*

NP-598406 1501 LELAPQNYVYLRISQWNIIFLYTNTLRRIPGTALNNIAATISHPKLLRRAMHLDTITPIN  
CAA40788.1 1501 LELAPQNYVYLRISQWNIIFLYTNTLRRIPGTALNNIAATISHPKLLRRAMHLDTITPIN  
\*\*\*\*\*

NP-598406 1561 APYLASLDYVYLSIDAIGWGVQVYLDLNGIDLEILILSEDSMHWIDRAMHLTASRLTL  
CAA40788.1 1561 APYLASLDYVYLSIDAIGWGVQVYLDLNGIDLEILILSEDSMHWIDRAMHLTASRLTL  
\*\*\*\*\*

NP-598406 1621 LALVKGENTYTFPKIKGMPFESECLVLTETLAMCYQNTIHLDPDLQKYLINLTINPKLTAF  
CAA40788.1 1621 LALVKGENTYTFPKIKGMPFESECLVLTETLAMCYQNTIHLDPDLQKYLINLTINPKLTAF  
\*\*\*\*\*

NP-598406 1681 GNNPYLTKKILNQIHESDEGQYIITSYVESFEQLETDIILHSTLTAFYDSTENSCKVRFI  
CAA40788.1 1681 GNNPYLTKKILNQIHESDEGQYIITSYVESFEQLETDIILHSTLTAFYDSTENSCKVRFI  
\*\*\*\*\*

NP-598406 1741 EFDIFPHFESLEKYPLFVVDHDSQSAISTLI PGPPSHHVLRPLGVSTAWYEGISYCRYLE  
CAA40788.1 1741 EFDIFPHFESLEKYPLFVVDHDSQSAISTLI PGPPSHHVLRPLGVSTAWYEGISYCRYLE  
\*\*\*\*\*

NP-598406 1801 TQKIQTGDRILYLAEGSGASMSLELLFFPGITVYVNSLFSGGENPQQRNYAFLPTQFVQSV  
CAA40788.1 1801 TQKIQTGDRILYLAEGSGASMSLELLFFPGITVYVNSLFSGGENPQQRNYAFLPTQFVQSV  
\*\*\*\*\*

NP-598406 1861 FYKLQCADLADENLITDEVPLWNCNGAVTDLSTKDAVAFIHKVGAKASLWHDLEST  
CAA40788.1 1861 FYKLQCADLADENLITDEVPLWNCNGAVTDLSTKDAVAFIHKVGAKASLWHDLEST

```
*****
NP-598406. 1921 ANINQQTLSRSQIHSLI IATTVLKRSGLIYKTSWLFPSRFSQLAGLLWCFFDRINHLRS
CAA40788.1 1921 ANINQQTLSRSQIHSLI IATTVLKRGGLIYKTSWLFPSRFSQLAGLLWCFFDRINHLRS
*****

NP-598406. 1981 SYSDPHSHSVYLVCRLAADFTTISPSAALVTATLHNDGFTTIRFDVVC SYWQHRLNVG
CAA40788.1 1981 SYSDPHSHSVYLVCRLAADFTTISPSAALVTATLHNDGFTTIRFDVVC SYWQHRLNVG
*****

NP-598406. 2041 EVGKVIDEILDGLATNFFAGDNGLILRCGCTPSSRFWLEIDQLASTDLVQDALVTLTIR
CAA40788.1 2041 EVGKVIDEILDGLATNFFAGDNGLILRCGCTPSSRFWLEIDQLASTDLVQDALVTLTIR
*****

NP-598406. 2101 LKETIIVQSSHTEDYTSLLFTFYINICAAQKVRTIILILERSLMTVMWIVLPSGIRDS
CAA40788.1 2101 LKETIIVQSSHTEDYTSLLFTFYINICAAQKVRTIILILERSLMTVMWIVLPSGIRDS
*****

NP-598406. 2161 VRQLELGLSFRLLMSILSEQTFLKCTPTKGFLLDQLTRTYISTFFSHSVLPLHRPYQKQI
CAA40788.1 2161 VRQLELGLSFRLLMSILSEQTFLKCTPTKGFLLDQLTRTYISTFFSHSVLPLHRPYQKQI
*****

NP-598406. 2221 WKALGSVIYCSSTVDIPLIKDIQIRINDFEDIERGIDGSEL
CAA40788.1 2221 WKALGSVIYCSSTVDIPLINDIQTEDINDFEDIERGIDGSEL
*****
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### Results of SIM with:

Sequence 1: NP\_598406.1 (2282 residue)

Sequence 2: BAB00056.1 (2283 residue)

### using the parameters:

Comparison matrix: [BLOSUM62](#)

Number of alignments (computed): 20

Gap open penalty: 12

Gap extension penalty: 4



Evaluate the significance of this protein sequence similarity score using PRSS at EMBnet CH.

99.73% identity in 2264 residues overlap; Score: 11637.0; Gap frequency: 0.1%

```

NP_598406.1      1  MNASSEITLPEVHLNSPIVENKLIYVLLQHPNDLDISETLPLHNNNDQIAREESNLA
BAB00056.1      1  MNASSEITLPEVHLNSPIVENKLIYVLLQHPNDLDISETLPLHNNNDQIAREESNLA
*****

NP_598406.1     61  ERLGVAKSELIKVVPAPRATWWSHAAYVLINPSCI PFLVKFLPHSKLQPVVEQNYKLIINAS
BAB00056.1     61  ERLGVAKSELIKVVPAPRATWWSHAAYVLINPSCI PFLVKFLPHSKLQPVVEQNYKLIINAS
*****

NP_598406.1    121  CNTTSDSIDRCMENLSIKLTGNNNLFPSRSPCTAGACNISKITLNDIQSIWESNKNQPNVS
BAB00056.1    121  CNTTSDSIDRCMENLSIKLTGNNNLFPSRSPCTAGACNISKITLNDIQSIWESNKNQPNVS
*****

NP_598406.1    181  LNLTIKYQMEQLIMHQSGRQPTDLVHIYDTRAGLIVITPELVICPDRLNSVLMYFIFEMI
BAB00056.1    181  LNLTIKYQMEQLIMHQSGRQPTDLVHIYDTRAGLIVITPELVICPDRLNSVLMYFIFEMI
*****

NP_598406.1    241  LNVSDMFEGPMNVYALCTISHYLSFLGPRIDFLPSIVDELAQLLGDTVYKVIASLRLSVY
BAB00056.1    241  LNVSDMFEGPMNVYALCTISHYLSFLGPRIDFLPSIVDELAQLLGDTVYKVIASLRLSVY
*****

```

NP-598406. 301 GCLQLKDFVVELAGSPHSFITQETIDILIGSKALDDEHSITVTTQLLDIFENLSPDLIAE  
BAE00056.1 301 GCLQLKDFVVELAGSPHSFITQETIDILIGSKALDDEHSITVTTQLLDIFENLSPDLIAE  
\*\*\*\*\*

NP-598406. 361 NLCLMRLWGHFTLTAAQV-GRVRESMCAGKLLDFTTIMKTIAFFNTILINGYRRKKNGMW  
BAE00056.1 361 NLCLMRLWGHFTLTAAQV-GRVRESMCAGKLLDFTTIMKTIAFFNTILINGYRRKKNGMW  
\*\*\*\*\*

NP-598406. 420 FPLILPKNASKGLIEFQHDNAEISYEYTLKHWKEISLIEFRKCPDFDPGUELSTPMKDKA  
BAE00056.1 421 FPLILPKNASKGLIEFQHDNAEISYEYTLKHWKEISLIEFRKCPDFDPGUELSTPMKDKA  
\*\*\*\*\*

NP-598406. 480 IEAPRSDWMSVFRSLIQHQRHHIIPMPNPFPHRLLLNFLLEDGDFDVAELQVTSGEY  
BAE00056.1 481 IEAPRSDWMSVFRSLIQHQRHHIIPMPNPFPHRLLLNFLLEDGDFDVAELQVTSGEY  
\*\*\*\*\*

NP-598406. 540 LQDDTFCASYSLKKEKIKPDGRIFAKITRMHSCQVIAEAILAHAGFILMKENGSVVLNQL  
BAE00056.1 541 LQDDTFCASYSLKKEKIKPDGRIFAKITRMHSCQVIAEAILAHAGFILMKENGSVVLNQL  
\*\*\*\*\*

NP-598406. 600 SLTKSLLTMSQIGIISFKAKRYTRDNLSGQGPHITITDSFNKRKSEPTASSYLTPDPTFE  
BAE00056.1 601 SLTKSLLTMSQIGIISFKAKRYTRDNLSGQGPHITITDSFNKRKSEPTASSYLTPDPTFE  
\*\*\*\*\*

NP-598406. 660 LSACFITDILAKYCLQWFXQTIHFAITLNRMYGVPHLFEWHLRLIRSELVYGDFFNPF  
BAE00056.1 661 LSACFITDILAKYCLQWFXQTIHFAITLNRMYGVPHLFEWHLRLIRSELVYGDFFNPF  
\*\*\*\*\*

NP-598406. 720 AATDAPDLKVLNODIFIVS-RGGIEHLQCKMWTMISISVILSSAESNTIRVMENVOGLN  
BAE00056.1 721 AATDAPDLKVLNODIFIVS-RGGIEHLQCKMWTMISISVILSSAESNTIRVMENVOGLN  
\*\*\*\*\*

NP-598406. 779 QAIATYTKVYFRELPSIQKELAYAAASKLFFERLRANNYGLGHQLKAGETIISSTFFIYSE  
BAE00056.1 781 QAIATYTKVYFRELPSIQKELAYAAASKLFFERLRANNYGLGHQLKAGETIISSTFFIYSE  
\*\*\*\*\*

NP-598406. 839 RVFYQGRILTQALKNASKLCLTAQVLGECTQASCNSATTIMRLTENQVEKDTCYKLNIT  
BAE00056.1 841 RVFYQGRILTQALKNASKLCLTAQVLGECTQASCNSATTIMRLTENQVEKDTCYKLNIT  
\*\*\*\*\*

NP-598406. 899 QSIHQTYLILFFQYSIEGETISSEIFLQHPRLISRIVLLPSQLGGLNYLACSRFPNNTG  
BAE00056.1 901 QSIHQTYLILFFQYSIEGETISSEIFLQHPRLISRIVLLPSQLGGLNYLACSRFPNNTG  
\*\*\*\*\*

NP-598406. 959 DPLGTAVADLKLKCGALESWILYNLLARKPGKGSWATLAADFYSLNQEYLYPPTILK  
BAE00056.1 961 DPLGTAVADLKLKCGALESWILYNLLARKPGKGSWATLAADFYSLNQEYLYPPTILK  
\*\*\*\*\*

NP-598406. 1019 RHTQNTLMEICRNPMLKGVFTONAKEEENLLAKFLLEDIVLPRVAHIIIDQSSIGKPKKQ  
BAE00056.1 1021 RHTQNTLMEICRNPMLKGVFTONAKEEENLLAKFLLEDIVLPRVAHIIIDQSSIGKPKKQ  
\*\*\*\*\*

NP-598406. 1079 IQGFEDYKNTIMRRSFYKELSTKTLSEVLEXNTNYSVNNYPVILNPLPESYLYEYTDQ



BAR00056.1 1081 IQGFVDTTIRTIMERSFTEIKPLSTFKXTLSVLEYNTRYLSYRYPVILAPLPFPGYLNVTITDQ  
\*\*\*\*\*

NP-598406. 1139 TCSIDISRSLRKLSWSGLNGETLEGLTETPDPTEFVNSFLIVGTGDCCLFCNQGDDKPTWF  
BAR00056.1 1141 TCSIDISRSLRKLSWSGLNGETLEGLTETPDPTEFVNSFLIVGTGDCCLFCNQGDDKPTWF  
\*\*\*\*\*

NP-598406. 1199 FLPMRTIIDGNPETHNPPFIRVPYIISRTTEKRVASMAVIEGATHSLKAALRGASVYINAWG  
BAR00056.1 1201 FLPMRTIIDGNPETHNPPFIRVPYIISRTTEKRVASMAVIEGATHSLKAALRGASVYINAWG  
\*\*\*\*\*

NP-598406. 1259 DTVVNMNDAIDIAETTVFISLEQLQTLITPLPTSANITHRLDGGATTLKFTFASSTAFSSY  
BAR00056.1 1261 DTVVNMNDAIDIAETTVFISLEQLQTLITPLPTSANITHRLDGGATTLKFTFASSTAFSSY  
\*\*\*\*\*

NP-598406. 1319 THINDDQYLEIDGRVVDENIIXQYLMITSLGIILETYHNEFFIRTSQBITLHLNTESSCC  
BAR00056.1 1321 THINDDQYLEIDGRVVDENIIXQYLMITSLGIILETYHNEFFIRTSQBITLHLNTESSCC  
\*\*\*\*\*

NP-598406. 1379 VREVDGCLICESNGEVPQITVFTYNTFFVYDFDPLADYIEIAHLDYLSYQAKIGSTHYYSIT  
BAR00056.1 1381 VREVDGCLICESNGEVPQITVFTYNTFFVYDFDPLADYIEIAHLDYLSYQAKIGSTHYYSIT  
\*\*\*\*\*

NP-598406. 1419 DKIELLANHLTAKQMINSLIGLDETFSVNDDAVILSDYTNWISRCSTYTKILLVPKLMANN  
BAR00056.1 1441 DKIELLANHLTAKQMINSLIGLDETFSVNDDAVILSDYTNWISRCSTYTKILLVPKLMANN  
\*\*\*\*\*

NP-598406. 1499 FLLELAFQMYLLRISQWNTNIFDYTYMTLRRIFGTALNNIAATLHNPILLRPMNLLDITP  
BAR00056.1 1501 FLLELAFQMYLLRISQWNTNIFDYTYMTLRRIFGTALNNIAATLHNPILLRPMNLLDITP  
\*\*\*\*\*

NP-598406. 1559 IIRAPYIASLDYVKLSIDAIQNGVQVLAADLNGITULEILILSEDSMEISDRAHNLTKRL  
BAR00056.1 1561 IIRAPYIASLDYVKLSIDAIQNGVQVLAADLNGITULEILILSEDSMEISDRAHNLTKRL  
\*\*\*\*\*

NP-598406. 1619 TLLALVRGENYTFPKIKMPPEKCLVLTEYKLMCTQNTNHLQDLQKYLXNLTNPFELTA  
BAR00056.1 1621 TLLALVRGENYTFPKIKMPPEKCLVLTEYKLMCTQNTNHLQDLQKYLXNLTNPFELTA  
\*\*\*\*\*

NP-598406. 1679 FPGNNPFLTKKILNQIRASDEGQVITTSYYESFBEQLETDTILHSTLTAFYDSEETLTKFD  
BAR00056.1 1691 FPGNNPFLTKKILNQIRASDEGQVITTSYYESFBEQLETDTILHSTLTAFYDSEETLTKFD  
\*\*\*\*\*

NP-598406. 1739 FIFFDLFFHPESLEKYFLEVNDHDSQSAISTLIFGPPFHHVLRFLQVSSSTAWYKGISYCKY  
BAR00056.1 1741 -LSLDLFFHPESLEKYFLEVNDHDSQSAISTLIFGPPFHHVLRFLQVSSSTAWYKGISYCKY  
\*\*\*\*\*

NP-598406. 1799 LETQKIQTDHLYLARSQASMLLELLFPQRTVYTHSLFSSGENPQPNYAPLPTQFVQ  
BAR00056.1 1800 LETQKIQTDHLYLARSQASMLLELLFPQRTVYTHSLFSSGENPQPNYAPLPTQFVQ  
\*\*\*\*\*

NP-598406. 1859 SVFYKLWQADLADGNLIKDFVPLWNGGAVTDLSTKDAVAFTINKVGAEKASLVHIDLE  
BAR00056.1 1860 SVFYKLWQADLADGNLIKDFVPLWNGGAVTDLSTKDAVAFTINKVGAEKASLVHIDLE

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NP-598406. 1919 STANINQQTLSRSQIHSLIHAATTVLKPQCILLYKTSWLPSEFSQLAGLLWCFFDRINLI
BAR00056.1 1920 STANINQQTLSRSQIHSLIHAATTVLKPQCILLYKTSWLPSEFSQLAGLLWCFFDRINLI
*****
NP-598406. 1979 RSEYSDPHSEHEVYLVCRLAADFRTIOFSAALVTATTLRNDGFTTHFDVVCSTWQHLEN
BAR00056.1 1980 RSEYSDPHSEHEVYLVCRLAADFRTIOFSAALVTATTLRNDGFTTHFDVVCSTWQHLEN
*****
NP-598406. 2039 VGEVGVKVIDEILDGLATNFFAGDNLILRCGGTPSSSKWLEIDQLASFDLVQCALVTLIT
BAR00056.1 2040 VGEVGVKVIDEILDGLATNFFAGDNLILRCGGTPSSSKWLEIDQLASFDLVQCALVTLIT
*****
NP-598406. 2099 INLEKILFVQSSHTEDYTELLFTFTYHGAAGKVRTIINLILERSLMTTVENKINLFPSSIE
BAR00056.1 2100 INLEKILFVQSSHTEDYTELLFTFTYHGAAGKVRTIINLILERSLMTTVENKINLFPSSIE
*****
NP-598406. 2159 DSVFQDLRLGSEFRILMSILSEQTFLEKTFTEKYLIDQLTFYILSTFFNHSVLFLHPPYQK
BAR00056.1 2160 DSVFQDLRLGSEFRILMSILSEQTFLEKTFTEKYLIDQLTFYILSTFFNHSVLFLHPPYQK
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NP-598406. 2219 QIWEKALGSVIYCSFTVDIPLIKDIQIEDINDPEDIERSIDGEEL
BAR00056.1 2220 QIWEKALGSVIYCSFTVDIPLIKDIQIEDINDPEDIERSIDGEEL
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### Supplemental Response at Examiner's Request

Applicants note that this response is being made at the request of the examiner; therefore, no reduction in any patent term extension due to Applicants should occur based on this response (see 37 CFR 1.704(c)(8)).

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